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## Inventor Information for 10/815429

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| US<br>20060091559<br>A1 | 20060504 | Hardmask for improved reliability of silicon based dielectrics   | 257/775 | 438/638;<br>438/790 | Nguyen; Son Van et al.   |
| US<br>20060079099<br>A1 | 20060413 | Ultra low k plasma enhanced chemical vapor deposition processes using a single bifunctional precursor containing both a SiCOH matrix functionality and organic porogen functionality | 438/789 | 438/790             | Nguyen; Son Van et al.   |
| US<br>20060055004<br>A1 | 20060316 | Low K and ultra low K SiCOH dielectric films and methods to form the same  | 257/632 | 257/E23.167         | Gates; Stephen M. et al. |
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| US<br>20060036893<br>A1 | 20060216 | Method and system<br>for debugging<br>Ethernet  | 714/4     |                       | Anglin;<br>Debbie Ann<br>et al.      |
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| US<br>20060002023<br>A1 | 20060105 | Magnetic head having<br>a deposited second<br>magnetic shield and<br>fabrication method<br>therefor   | 360/126   | 360/319               | Le; Quang<br>et al.                  |
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| US<br>20060000794<br>A1 | 20060105 | Methods of fabricating<br>magnetic write heads<br>with side and trailing<br>shield structures   | 216/22    | 216/41;<br>216/67     | Le; Quang                            |
| US<br>20060000080<br>A1 | 20060105 | Methods of making<br>write coils using<br>ruthenium seed layer<br>and reactive ion<br>etching in ozone gas<br>for seed layer removal            | 29/603.25 | 29/603.07;<br>360/123 | Bonhote;<br>Christian<br>Rene et al. |
| US<br>20050277302<br>A1 | 20051215 | Advanced low<br>dielectric constant<br>barrier layers   | 438/763   | 438/778;<br>438/786   | Nguyen,<br>Son Van et<br>al.         |
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| US<br>20050243598<br>A1 | 20051103 | MRAM arrays and methods for writing and reading magnetic memory devices  | 365/158    |   | Lin, Wen-Chin et al.          |
| US<br>20050243465<br>A1 | 20051103 | High aspect ratio coplanar structure fabrication consisting of different materials   | 360/126    |   | Lille, Jeffrey S. et al.      |
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| US<br>20050219747<br>A1 | 20051006 | Trailing edge taper design and method for making a perpendicular write head with shielding   | 360/126    |   | Hsu, Yimin et al.             |
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| US<br>20050194619<br>A1 | 20050908 | SiCOH dielectric<br>material with<br>improved toughness<br>and improved Si-C<br>bonding,<br>semiconductor device<br>containing the same,<br>and method to make<br>the same | 257/232  | 257/E31.057   | Edelstein,<br>Daniel C. et<br>al.  |
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| US<br>20020093762<br>A1 | 20020718 | Method for seed layer removal for magnetic heads   | 360/126   | 29/603.23;<br>360/123  | Hsiao,<br>Richard et al.                  |
| US<br>20020089788<br>A1 | 20020711 | Storage system slider having trailing edge pad and method for making the same  | 360/235.7 |  | Baumgart,<br>Peter M. et al.              |
| US<br>20020085318<br>A1 | 20020704 | Device and method of reducing ESD damage in thin film read heads which enables measurement of gap resistances and method of making | 360/323   |  | Hsiao,<br>Richard et al.                  |
| US<br>20020085316<br>A1 | 20020704 | Magnetic transducer with electrically conductive shield for reducing electromagnetic interference                                  | 360/319   | 29/603.07;<br>360/126  | Hsiao,<br>Richard et al.                  |
| US<br>20020084243<br>A1 | 20020704 | Chemical mechanical polishing thickness control in magnetic head fabrication   | 216/13    | 216/22;<br>438/584;<br>438/692;<br>438/712                         | Hsiao,<br>Richard et al.                  |
| US<br>20020083576<br>A1 | 20020704 | ESD protection during GMR head fabrication   | 29/603.13 |  | Hsiao,<br>Richard et al.                  |
| US<br>20020030928<br>A1 | 20020314 | Magnetic head having write head element with high aspect ration coil   | 360/123   |  | Hsiao,<br>Richard et al.                  |
| US<br>20010004797<br>A1 | 20010628 | Method of making a read sensor for a merged magnetic head with self-aligned low resistance leads                                   | 29/603.07 | 216/22;<br>29/603.15   | Hsiao,<br>Richard                         |
| US<br>20010001586<br>A1 | 20010524 | Planar stitched write head having write coil insulated with inorganic insulation   | 360/126   |  | Dill,<br>Frederick<br>Hayes JR.<br>et al. |
| US<br>20010001256<br>A1 | 20010517 | Read sensor with self-aligned low resistance leads and method of making  | 360/246.6 | 29/603.03;<br>29/603.07;<br>29/603.13;<br>29/603.15;<br>360/244.2; | Hsiao,<br>Richard                         |

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|                  |          |  |           | 360/265.7;<br>360/318  |                                    |
| US 7061729<br>B2 | 20060613 | Protective cap in lead overlay magnetic sensors  | 360/322   | 360/324.1  | Freitag;<br>James Mac<br>et al.    |
| US 7060638<br>B2 | 20060613 | Method of forming low dielectric constant porous films   | 438/787   |  | Nguyen;<br>Son Van et<br>al.       |
| US 7050290<br>B2 | 20060523 | Integrated capacitor   | 361/312   | 361/305  | Tang;<br>Denny et al.              |
| US 7049247<br>B2 | 20060523 | Method for fabricating an ultralow dielectric constant material as an intralevel or interlevel dielectric in a semiconductor device and electronic device made | 438/778   | 438/780;<br>438/782  | Gates;<br>Stephen M.<br>et al.     |
| US 7043823<br>B2 | 20060516 | Method of manufacturing a current-perpendicular-to-plane magnetoresistive device with oxidized free layer side regions   | 29/603.07 | 216/22;<br>216/40;<br>216/41;<br>29/603.12;<br>29/603.13;<br>29/603.14;<br>29/603.15;<br>29/603.16;<br>29/603.18;<br>360/313;<br>360/324.2 | Childress;<br>Jeffrey R.<br>et al. |
| US 7037847<br>B2 | 20060502 | Methods for fabricating read sensor for magnetic heads with reduced read track width   | 438/712   | 438/241  | Le; Quang<br>et al.                |
| US 7035083<br>B2 | 20060425 | Interdigitated capacitor and method for fabrication thereof  | 361/321.1 | 257/253;<br>257/254;<br>361/301.2;<br>361/301.4;<br>361/306.1;<br>361/321.2  | Lin; Wen-<br>Chin et al.           |
| US 7031121<br>B2 | 20060418 | Perpendicular recording magnetic head with a write shield magnetically coupled to a first pole piece   | 360/317   | 360/319  | Khera;<br>Gautam et<br>al.         |

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| US 7030468<br>B2 | 20060418 | Low k and ultra low k SiCOH dielectric films and methods to form the same  | 257/632   | 174/138R;<br>257/633;<br>257/634;<br>257/635;<br>257/636;<br>257/644;<br>257/645;<br>257/646  | Gates;<br>Stephen M.<br>et al.       |
| US 7024756<br>B2 | 20060411 | Method of making a perpendicular recording magnetic head pole tip with an etchable adhesion CMP stop layer         | 29/603.12 | 204/192.2;<br>204/192.34;<br>216/22;<br>216/48;<br>216/52;<br>29/603.15;<br>29/603.16;<br>29/603.18   | Le; Quang<br>et al.                  |
| US 7022248<br>B2 | 20060404 | Method for patterning a self-aligned coil using a damascene process  | 216/22    | 216/13;<br>216/17;<br>216/18;<br>216/88;<br>216/89;<br>29/603.01  | Bedell;<br>Daniel<br>Wayne et<br>al. |
| US 7014530<br>B2 | 20060321 | Slider fabrication system for sliders with integrated electrical lapping guides                                    | 451/8     | 451/41  | Kasiraj;<br>Prakash et<br>al.        |
| US 7011890<br>B2 | 20060314 | Modulated/composited CVD low-k films with improved mechanical and electrical properties for nanoelectronic devices | 428/447   | 257/E21.261;<br>257/E21.277;<br>426/131;<br>427/101;<br>427/387;<br>427/470;<br>427/489;<br>427/494;<br>427/495;<br>427/508;<br>427/515;<br>427/595 | Nguyen;<br>Son Van et<br>al.         |
| US 7009812<br>B2 | 20060307 | Magnetic transducer for perpendicular magnetic recording with single pole write head with trailing shield          | 360/126   |   | Hsu; Yimin<br>et al.                 |
| US 7002775<br>B2 | 20060221 | Head for perpendicular   | 360/125   |   | Hsu; Yimin<br>et al.                 |



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|               |          | magnetic recording with a shield structure connected to the return pole piece   |           |   |                              |
| US 6996894 B2 | 20060214 | Methods of making magnetic heads with improved contiguous junctions   | 29/603.12 | 204/192.34;<br>216/22;<br>216/40;<br>29/603.13;<br>29/603.15;<br>29/603.16;<br>29/603.18;<br>360/322  | Hsiao;<br>Richard et al.     |
| US 6987646 B2 | 20060117 | Method of making magnetic head having narrow pole tip and fine pitch coil   | 360/126   | 360/125   | Hsiao;<br>Richard et al.     |
| US 6984579 B2 | 20060110 | Ultra low k plasma CVD nanotube/spin-on dielectrics with improved properties for advanced nanoelectronic device fabrication | 438/622   | 257/750;<br>257/758;<br>257/E21.576;<br>257/E21.581;<br>438/618;<br>977/890   | Nguyen;<br>Son Van et al.    |
| US 6949200 B2 | 20050927 | Planar magnetic head and fabrication method therefor  | 216/22    | 216/38;<br>216/39;<br>216/75;<br>29/603.07  | Fontana;<br>Robert E. et al. |
| US 6948231 B2 | 20050927 | Method of depositing material into high aspect ratio features   | 29/603.25 | 216/62;<br>216/65;<br>216/66;<br>29/603.13;<br>29/603.14;<br>29/606;<br>360/122;<br>360/126;<br>360/317;<br>427/127;<br>427/128;<br>451/41; 451/5 | Hsiao;<br>Richard et al.     |
| US 6944937 B2 | 20050920 | Method of reducing ESD damage in thin film read heads which enables measurement of gap resistance                           | 29/603.09 | 29/603.07;<br>29/603.11;<br>29/603.13;<br>29/603.14;<br>29/605;<br>29/606;<br>29/609;   | Hsiao;<br>Richard et al.     |

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|                  |          |  |           | 324/309;<br>324/314;<br>324/318;<br>324/322;<br>324/525;<br>324/526;<br>324/528;<br>360/313;<br>360/319;<br>360/321;<br>360/322;<br>360/323;<br>360/324;<br>427/127;<br>427/128;<br>451/41; 451/5 |                                      |
| US 6927940<br>B2 | 20050809 | Method for seed layer removal for magnetic heads   | 360/126   | 360/123   | Hsiao;<br>Richard et al.             |
| US 6919280<br>B2 | 20050719 | Method of removing magnetoresistive sensor cap by reactive ion etching                   | 438/710   | 438/712;<br>438/722   | Hsiao;<br>Richard et al.             |
| US 6913992<br>B2 | 20050705 | Method of modifying interlayer adhesion  | 438/628   | 257/E21.26;<br>257/E21.277;<br>257/E21.576;<br>257/E21.579;<br>438/622;<br>438/623;<br>438/638  | Schmitt;<br>Francimar Campana et al. |
| US 6913704<br>B2 | 20050705 | Magnetic head induction coil fabrication method utilizing aspect ratio dependent etching | 216/22    | 216/52;<br>216/67;<br>216/72;<br>216/74;<br>216/75  | Hsiao;<br>Richard et al.             |
| US 6901653<br>B2 | 20050607 | Process for manufacturing a magnetic head coil structure                                 | 29/603.25 | 216/39;<br>216/47;<br>29/603.23;<br>29/606;<br>336/200;<br>360/123  | Hsiao;<br>Richard et al.             |
| US 6878620<br>B2 | 20050412 | Side wall passivation films for damascene cu/low k electronic devices                    | 438/633   | 257/E21.576;<br>257/E21.584;<br>438/634;<br>438/637;<br>438/643;  | Nguyen;<br>Son Van et al.            |

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|                  |          |   |            | 438/644  |                                    |
| US 6878240<br>B2 | 20050412 | Apparatus and method for obtaining symmetrical junctions between a read sensor and hard bias layers | 204/192.11 | 204/298.04;<br>204/298.15;<br>427/131  | Bus-Kwofie;<br>Raymond et al.      |
| US 6873535<br>B1 | 20050329 | Multiple width and/or thickness write line in MRAM  | 365/66     | 257/E21.665;<br>257/E27.005;<br>365/158;<br>365/171;<br>365/51;<br>365/63; 438/3   | Lin; Wen<br>Chin et al.            |
| US 6870705<br>B2 | 20050322 | Magnetic head having short pole yoke length and method for fabrication thereof                      | 360/126    | 360/123  | Hsiao;<br>Richard et al.           |
| US 6862798<br>B2 | 20050308 | Method of making a narrow pole tip by ion beam deposition   | 29/603.13  | 204/192.15;<br>205/119;<br>205/122;<br>216/39;<br>216/41;<br>29/603.07;<br>29/603.15;<br>29/603.16;<br>29/603.18;<br>360/122;<br>360/126;<br>360/317;<br>427/127;<br>427/128 | Kruger;<br>James<br>Bernard et al. |
| US 6859998<br>B2 | 20050301 | Method of fabricating a narrow projection such as a write pole extending from a substrate           | 29/603.13  | 204/192.1;<br>204/192.11;<br>216/11;<br>216/22;<br>216/47;<br>29/603.12;<br>29/603.15;<br>29/603.18;<br>29/DIG.16;<br>360/122;<br>360/125;<br>430/315;<br>430/320            | Kruger;<br>James et al.            |
| US 6859347<br>B2 | 20050222 | Magnetic transducer with electrically conductive shield for   | 360/319    |  | Hsiao;<br>Richard et al.           |

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|               |          | reducing electromagnetic interference  |           |   |                                 |
| US 6819527 B1 | 20041116 | Magnetic head with lower coil traces connected to integrally formed vertical interconnects and upper coil traces through plural insulating layer arrangement | 360/123   | 360/126   | Dill; Frederick Hayes et al.    |
| US 6804879 B2 | 20041019 | Method of fabricating a magnetic transducer with a write head having a multi-layer coil  | 29/603.24 | 216/22;<br>216/47;<br>216/48;<br>216/87;<br>29/603.16;<br>29/603.18;<br>29/603.23;<br>29/603.25;<br>360/119;<br>360/122;<br>360/123 | Hsiao; Richard D. et al.        |
| US 6804878 B1 | 20041019 | Method of improving the reliability of magnetic head sensors by ion milling smoothing  | 29/603.12 | 204/192.34;<br>216/22;<br>216/52;<br>216/66;<br>29/603.15;<br>29/603.16;<br>29/603.18;<br>451/41                                    | Campbell; Richard Thomas et al. |
| US 6801206 B2 | 20041005 | Method and apparatus for virtualized operator panel  | 345/556   | 345/544;<br>711/153;<br>711/173   | Poimboeuf; Joshua Nathan et al. |
| US 6795278 B2 | 20040921 | Method of protecting read sensors from electrostatic discharge damage during the manufacture of magnetic heads   | 360/323   |   | Jarrett; James Devereaux et al. |
| US 6792577 B1 | 20040914 | Data distribution method and apparatus, and data receiving method and apparatus  | 715/522   | 380/255;<br>380/258;<br>705/50;<br>705/67;<br>705/71;   | Kimoto; Yosuke                  |

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|                  |          |  |           | 715/513;<br>715/523   |                                 |
| US 6785101<br>B2 | 20040831 | Overlaid lead giant magnetoresistive head with side reading reduction  | 360/324.1 |   | Webb;<br>Patrick<br>Rush et al. |
| US 6778433<br>B1 | 20040817 | High programming efficiency MRAM cell structure  | 365/173   | 365/158;<br>365/171   | Tang;<br>Denny                  |
| US 6776917<br>B2 | 20040817 | Chemical mechanical polishing thickness control in magnetic head fabrication   | 216/88    | 216/89;<br>216/94;<br>438/691;<br>438/692;<br>451/29              | Hsiao;<br>Richard et al.        |
| US 6744607<br>B2 | 20040601 | Exchange biased self-pinned spin valve sensor with recessed overlaid leads   | 360/322   |   | Freitag;<br>James Mac et al.    |
| US 6741422<br>B2 | 20040525 | Method of making magnetic head having narrow pole tip and fine pitch coil  | 360/126   | 29/603.15   | Hsiao;<br>Richard et al.        |
| US 6723252<br>B1 | 20040420 | Magnetic head P1 magnetic pole notching with reduced polymer deposition  | 216/22    | 216/37;<br>216/66;<br>216/75                                      | Hsiao;<br>Richard et al.        |
| US 6711053<br>B1 | 20040323 | Scaleable high performance magnetic random access memory cell and array  | 365/158   | 365/171;<br>365/173   | Tang;<br>Denny                  |
| US 6683136<br>B2 | 20040127 | Epoxidized soybean oil enhanced hydrogenation of nitrile copolymer   | 525/329.3 | 524/464;<br>525/338;<br>525/339                                   | Guo;<br>Sharon X.<br>et al.     |
| US 6678127<br>B2 | 20040113 | Device and method of reducing ESD damage in thin film read heads which enables measurement of gap resistances and method of making | 360/323   |   | Hsiao;<br>Richard et al.        |
| US 6664026<br>B2 | 20031216 | Method of manufacturing high aspect ratio photolithographic features   | 430/311   | 216/72;<br>257/E21.035;<br>257/E21.044;<br>427/249.7;<br>430/313; | Nguyen;<br>Son Van et al.       |

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|                  |          |   |           | 430/316;<br>430/317;<br>430/318;<br>438/702   |                                       |
| US 6655007<br>B2 | 20031202 | Method of making a read sensor for a merged magnetic head with self-aligned low resistance leads    | 29/603.12 | 204/192.34;<br>216/22;<br>216/66;<br>216/67;<br>29/603.07;<br>29/603.13;<br>29/603.18   | Hsiao;<br>Richard                     |
| US 6650511<br>B2 | 20031118 | Magnetic head assembly with electrostatic discharge (ESD) shunt/pads seed layer                     | 360/323   |   | Hsiao;<br>Richard et al.              |
| US 6646059<br>B2 | 20031111 | Process for removing iron-and rhodium-containing catalyst residues from hydrogenated nitrile rubber | 525/338   | 525/332.8;<br>525/332.9;<br>525/333.1;<br>525/333.2;<br>525/339;<br>525/351;<br>525/352 | Nguyen;<br>Paul et al.                |
| US 6631546<br>B1 | 20031014 | Self-aligned void filling for mushroomed plating  | 29/603.07 | 216/22;<br>216/49;<br>216/67;<br>29/846;<br>29/847;<br>427/96.2                         | Dinan;<br>Thomas Edward et al.        |
| US 6623652<br>B1 | 20030923 | Reactive ion etching of the lapped trailing edge surface of a slider                                | 216/22    | 216/67;<br>216/72;<br>216/80;<br>29/603.07  | Hsiao;<br>Richard et al.              |
| US 6621660<br>B2 | 20030916 | Thin film magnetic head   | 360/126   | 360/123   | Hsiao;<br>Richard et al.              |
| US 6609948<br>B1 | 20030826 | Method of making an electronic lapping guide (ELG) for lapping a read sensor                        | 451/5     | 29/603.14;<br>29/603.16;<br>451/1;<br>451/11;<br>451/259;<br>451/28                     | Fontana,<br>Jr.; Robert Edward et al. |
| US 6606263<br>B1 | 20030812 | Non-disturbing programming scheme for magnetic RAM  | 365/158   | 365/171;<br>365/173   | Tang;<br>Denny                        |
| US 6602962       | 20030805 | Process for the   | 525/338   | 525/329.3;  | Nguyen;                               |

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| B2            |          | production of hydrogenated nitrile rubber  |         | 525/339   | Paul et al.                   |
| US 6589436 B1 | 20030708 | Method of adjusting the flatness of a slider using selective plasma etching                                      | 216/52  | 216/2;<br>216/22;<br>216/65;<br>216/66;<br>216/67;<br>219/121.69;<br>219/121.73;<br>29/603.12;<br>360/235.4;<br>360/318.1 | Tabib; Jila et al.            |
| US 6570739 B2 | 20030527 | Magnetic head having write head element with high aspect ratio coil  | 360/123 | 360/317   | Hsiao; Richard et al.         |
| US 6516367 B1 | 20030204 | Method and system for detecting bus device configuration changes   | 710/109 | 710/104;<br>713/2   | Barenys; Michael Anton et al. |
| US 6515826 B1 | 20030204 | Magnetic head induction coil fabrication method utilizing aspect ratio dependent etching                         | 360/126 | 360/123   | Hsiao; Richard et al.         |
| US 6507456 B1 | 20030114 | Dual coil and lead connections fabricated by image transfer and selective etch                                   | 360/123 |   | Dinan; Thomas Edward et al.   |
| US 6503406 B1 | 20030107 | Method for forming the air bearing surface of a slider using nonreactive plasma                                  | 216/22  | 216/41;<br>216/49;<br>216/51;<br>216/67;<br>216/81;<br>29/603.15;<br>430/961  | Hsiao; Yiping et al.          |
| US 6495439 B1 | 20021217 | Method for suppressing pattern distortion associated with BPSG reflow and integrated circuit chip formed thereby | 438/597 | 257/E21.279;<br>257/E21.576;<br>257/E23.167;<br>438/602;<br>438/760;<br>438/763   | Gambino; Jeffrey Peter et al. |
| US 6489255 B1 | 20021203 | Low temperature/low dopant oxide glass film  | 438/784 | 257/E21.275;<br>438/632;<br>438/787;  | Nguyen; Son Van et al.        |

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|                  |          |  |            | 438/790   |   |
| US 6483172<br>B1 | 20021119 | Semiconductor device structure with hydrogen-rich layer for facilitating passivation of surface states                     | 257/639    | 257/640;<br>257/760;<br>257/E21.194;<br>257/E21.212;<br>257/E21.269;<br>257/E21.654                                       | Cote;<br>Donna<br>Rizzone et al.        |
| US 6477011<br>B1 | 20021105 | Magnetic recording device having an improved slider  | 360/235.1  |   | Hsiao;<br>Richard et al.                |
| US 6470566<br>B2 | 20021029 | ESD protection during GMR head fabrication   | 29/603.13  | 29/603.07;<br>360/323   | Hsiao;<br>Richard et al.                |
| US 6466408<br>B2 | 20021015 | Storage system slider having trailing edge pad and method for making the same  | 360/235.7  |   | Baumgart;<br>Peter M. et al.            |
| US 6437950<br>B1 | 20020820 | Top spin valve sensor that has an iridium manganese (IrMn) pinning layer and an iridium manganese oxide (IrMnO) seed layer | 360/324.11 | 360/324.12  | Chau;<br>Phong et al.                   |
| US 6416935<br>B1 | 20020709 | Method for forming the air bearing surface of a slider   | 430/320    | 360/122   | Hsiao;<br>Yiping et al.                 |
| US 6399976<br>B1 | 20020604 | Shrink-wrap collar for DRAM deep trenches  | 257/301    | 257/303;<br>257/306;<br>257/310;<br>257/311;<br>257/410;<br>257/443;<br>257/59;<br>257/72;<br>257/E21.396;<br>257/E21.651 | Geiss; Peter<br>John et al.             |
| US 6379570<br>B1 | 20020430 | Method of making high definition chevron type MR sensor  | 216/22     | 204/192.1;<br>216/41;<br>216/49;<br>29/603.01;<br>29/603.18   | Fatula, Jr.;<br>Joseph John et al.      |
| US 6377423<br>B2 | 20020423 | Planar stitched write head having write coil insulated with inorganic insulation   | 360/126    |   | Dill, Jr.;<br>Frederick<br>Hayes et al. |



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| US 6346183<br>B1 | 20020212 | Use of thin carbon films as a bottom anti-reflective coating in manufacturing magnetic heads                              | 205/119    | 204/192.2;<br>427/131   | Baer;<br>Amanda et al.                  |
| US 6338939<br>B1 | 20020115 | Embedded dual coil fabrication process  | 430/320    | 29/603.14;<br>29/603.15;<br>29/603.18;<br>29/603.25;<br>430/314;<br>430/319                               | Clarke;<br>Thomas<br>Carl et al.        |
| US 6328859<br>B1 | 20011211 | Method of making second pole tip of a write head with a narrow track width  | 204/192.34 | 204/192.33  | Hsiao;<br>Richard et al.                |
| US 6326794<br>B1 | 20011204 | Method and apparatus for in-situ monitoring of ion energy distribution for endpoint detection via capacitance measurement | 324/678    | 324/464   | Lundquist;<br>Paul<br>Matthew et al.    |
| US 6306266<br>B1 | 20011023 | Method of making a top spin valve sensor with an in-situ formed seed layer structure for improving sensor performance     | 204/192.12 | 204/192.11  | Metin;<br>Serhat et al.                 |
| US 6239955<br>B1 | 20010529 | Stabilized MR sensor and heat guide joined by contiguous junction   | 360/321    |   | Dovek;<br>Moris Musa et al.             |
| US 6226149<br>B1 | 20010501 | Planar stitched write head having write coil insulated with inorganic insulation  | 360/126    | 29/603.14   | Dill, Jr.;<br>Frederick<br>Hayes et al. |
| US 6209193<br>B1 | 20010403 | Method of making read sensor with self-aligned low resistance leads   | 29/603.15  | 216/22;<br>216/49;<br>216/66;<br>216/72;<br>29/603.11;<br>29/603.13;<br>29/603.18;<br>360/319;<br>360/320 | Hsiao;<br>Richard                       |
| US 6191918<br>B1 | 20010220 | Embedded dual coil planar structure   | 360/126    |   | Clarke;<br>Thomas                       |

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|                  |          |  |         |  | Carl et al.                        |
| US 6181532<br>B1 | 20010130 | Stabilized MR sensor and flux/heat guide joined by contiguous junction   | 360/321 | 360/327.3  | Dovek; Moris Musa et al.           |
| US 6168845<br>B1 | 20010102 | Patterned magnetic media and method of making the same using selective oxidation                                       | 428/836 | 204/192.2;<br>427/128;<br>427/130;<br>427/131;<br>427/132;<br>427/250;<br>427/255.19;<br>427/255.4;<br>427/259;<br>427/267;<br>427/269;<br>427/282;<br>427/331;<br>427/398.4;<br>427/399;<br>427/404;<br>427/405;<br>427/407.1;<br>427/409;<br>427/419.2;<br>427/539;<br>427/552;<br>427/576;<br>427/595;<br>428/450;<br>428/457;<br>428/697;<br>428/701;<br>428/702;<br>428/704;<br>428/900 | Fontana, Jr.; Robert Edward et al. |
| US 6162582<br>A  | 20001219 | Method of making a high resolution lead to shield short-resistant read head  | 430/312 | 360/320;<br>360/322;<br>430/315;<br>430/319  | Hsiao; Richard et al.              |
| US 6162305<br>A  | 20001219 | Method of making spin valve read head with plasma produced metal oxide insulation layer between lead and shield layers | 148/280 | 148/284;<br>148/DIG.117;<br>29/603.07  | Hsiao; Richard et al.              |

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|-----------------|----------|---|------------|--|---------------------------------------|
| US 6132813<br>A | 20001017 | High density plasma surface modification for improving antiwetting properties                               | 427/490    | 427/127;<br>427/309;<br>427/491;<br>427/535;<br>427/536;<br>427/569  | Chen; Pei<br>C. et al.                |
| US 6118623<br>A | 20000912 | High definition chevron type MR sensor  | 360/320    | 360/313  | Fatula, Jr.;<br>Joseph John<br>et al. |
| US 6074566<br>A | 20000613 | Thin film inductive write head with minimal organic insulation material and method for its manufacture      | 360/123    | 216/13;<br>216/22;<br>216/27;<br>216/34;<br>216/49;<br>252/79.1;<br>252/79.4;<br>29/603.18;<br>360/122;<br>360/125;<br>360/126;<br>427/532;<br>427/534;<br>427/535;<br>427/548 | Hsiao;<br>Richard et<br>al.           |
| US 6069049<br>A | 20000530 | Shrink-wrap collar from DRAM deep trenches  | 438/386    | 257/E21.396;<br>257/E21.651;<br>438/243;<br>438/248;<br>438/391  | Geiss; Peter<br>John et al.           |
| US 6051099<br>A | 20000418 | Apparatus for achieving etch rate uniformity  | 156/345.37 | 118/723E;<br>118/724   | Bus-<br>Kwoffie;<br>Raymond et<br>al. |
| US 6031695<br>A | 20000229 | Combined read head and write head with non-magnetic electrically conductive layer on upper pole tip thereof | 360/126    | 360/121;<br>360/122;<br>360/317  | Hsiao;<br>Richard et<br>al.           |
| US 6027968<br>A | 20000222 | Advanced damascene planar stack capacitor fabrication method  | 438/254    | 257/E21.016;<br>257/E21.647  | Nguyen;<br>Son Van et<br>al.          |
| US 6027660<br>A | 20000222 | Method of etching ceramics of alumina/TiC with high density plasma  | 216/22     | 216/71;<br>216/76;<br>216/81   | Hsiao;<br>Richard et<br>al.           |

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| US 6013583<br>A | 20000111 | Low temperature<br>BPSG deposition<br>process  | 438/783   | 257/E21.243;<br>257/E21.275;<br>438/787;<br>438/790                             | Ajmera;<br>Atul C. et<br>al.        |
| US 6005944<br>A | 19991221 | System and method<br>for constructing block<br>ciphers   | 380/42    |   | Blaze;<br>Matthew A.                |
| US 6004473<br>A | 19991221 | Magnetic write head<br>having a coil with<br>submicron pitch   | 216/22    | 216/72;<br>29/603.18  | Hsiao;<br>Richard et<br>al.         |
| US 6004256<br>A | 19991221 | Catalytic distillation<br>oligomerization of<br>vinyl monomers to<br>make polymerizable<br>vinyl monomer<br>oligomers uses thereof<br>and methods for same | 585/517   | 508/503;<br>508/507;<br>508/508;<br>508/510                                     | Townsend;<br>Phillip et al.         |
| US 6001268<br>A | 19991214 | Reactive ion etching<br>of alumina/TiC<br>substrates   | 216/67    | 216/74;<br>216/76;<br>216/77  | Nguyen;<br>Son Van et<br>al.        |
| US 5999379<br>A | 19991207 | Spin valve read head<br>with plasma produced<br>metal oxide insulation<br>layer between lead and<br>shield layers and<br>method of making                  | 360/320   |   | Hsiao;<br>Richard et<br>al.         |
| US 5994215<br>A | 19991130 | Method for<br>suppression pattern<br>distortion associated<br>with BPSG reflow   | 438/624   | 257/760;<br>257/E21.576;<br>438/760   | Gambino;<br>Jeffrey<br>Peter et al. |
| US 5978183<br>A | 19991102 | High resolution lead to<br>shield short-resistant<br>read head   | 360/320   | 360/322   | Hsiao;<br>Richard et<br>al.         |
| US 5973385<br>A | 19991026 | Method for<br>suppressing pattern<br>distortion associated<br>with BPSG reflow and<br>integrated circuit chip<br>formed thereby                            | 257/644   | 257/650;<br>257/760;<br>257/E21.279;<br>257/E21.576;<br>257/E23.167;<br>428/210 | Gambino;<br>Jeffrey<br>Peter et al. |
| US 5930084<br>A | 19990727 | Stabilized MR sensor<br>and flux guide joined<br>by contiguous junction  | 360/321   |   | Dovek;<br>Moris Musa<br>et al.      |
| US 5901432<br>A | 19990511 | Method for making a<br>thin film inductive<br>write head having a<br>pedestal pole tip and   | 29/603.14 | 205/122;<br>216/22;<br>29/603.15;<br>29/603.18                                  | Armstrong;<br>Michael et<br>al.     |

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|                 |          | an electroplated gap   |           |  |                                       |
| US 5893981<br>A | 19990413 | Method of making stabilized MR sensor and flux guide joined by contiguous junction                         | 216/22    | 216/41   | Dovek;<br>Moris Musa<br>et al.        |
| US 5885750<br>A | 19990323 | Tantalum adhesion layer and reactive-ion-etch process for providing a thin film metallization area         | 430/314   | 204/192.17;<br>204/192.2;<br>257/E21.535;<br>257/E21.589;<br>427/97.2;<br>427/97.4;<br>430/318 | Hsiao;<br>Richard et<br>al.           |
| US 5867890<br>A | 19990209 | Method for making a thin film merged magnetoresistive read/inductive write head having a pedestal pole tip | 29/603.14 | 216/22;<br>29/603.15;<br>29/603.18;<br>360/317   | Hsiao;<br>Richard et<br>al.           |
| US 5855962<br>A | 19990105 | Flowable spin-on insulator   | 427/376.2 | 257/E21.271;<br>427/387;<br>427/58;<br>438/562;<br>438/918                                     | Cote;<br>Donna<br>Rizzone et<br>al.   |
| US 5770469<br>A | 19980623 | Method for forming semiconductor structure using modulation doped silicate glasses                         | 438/246   | 257/E21.278;<br>257/E21.576;<br>257/E23.118;<br>438/240;<br>438/424;<br>438/429;<br>438/982    | Uram;<br>Kevin J. et<br>al.           |
| US 5753948<br>A | 19980519 | Advanced damascene planar stack capacitor fabrication method   | 257/307   | 257/309;<br>257/310;<br>257/532;<br>257/E21.016;<br>257/E21.647                                | Nguyen;<br>Son Van et<br>al.          |
| US 5714798<br>A | 19980203 | Selective deposition process   | 257/642   | 257/634;<br>257/702;<br>257/E21.259;<br>257/E21.549  | Armacost;<br>Michael<br>David et al.  |
| US 5648113<br>A | 19970715 | Aluminum oxide LPCVD system  | 427/8     | 427/126.4;<br>427/226;<br>427/248.1;<br>427/255.34   | Barbee;<br>Steven<br>George et<br>al. |
| US 5540777<br>A | 19960730 | Aluminum oxide LPCVD system  | 118/667   | 118/668;<br>118/708;<br>118/712;   | Barbee;<br>Steven G.<br>et al.        |

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|                 |          |   |         | 118/715;<br>118/719;<br>118/726  |                                |
| US 5421507<br>A | 19950606 | Au-Sn transient liquid bonding in high performance laminates                  | 228/194 | 228/195;<br>228/198  | Davis;<br>Charles R.<br>et al. |
| US 5292688<br>A | 19940308 | Solder interconnection structure on organic substrates and process for making | 29/840  | 257/E21.503;<br>257/E21.511;<br>257/E23.007;<br>257/E23.121;<br>29/841   | Hsiao;<br>Richard et<br>al.    |
| US 5280414<br>A | 19940118 | Au-Sn transient liquid bonding in high performance laminates                  | 361/795 | 156/252;<br>174/255;<br>174/256;<br>174/257;<br>174/258;<br>29/830;<br>361/777;<br>361/778;<br>428/901                       | Davis;<br>Charles R.<br>et al. |
| US 5121190<br>A | 19920609 | Solder interconnection structure on organic substrates                        | 257/778 | 228/180.1;<br>228/180.22;<br>257/786;<br>257/E21.503;<br>257/E21.511;<br>257/E23.007;<br>257/E23.121;<br>361/764;<br>361/765 | Hsiao;<br>Richard et<br>al.    |